

REMARKS

Claims 1 to 14 are pending in the present application. Claims 1, 15, 22 and 32 are the independent claims. Claim 14 was amended herein to define an acronym. No new matter was added.

In the Office Action, dated Dec. 27, 2002, claim 14 was objected to, and claims 1-34 were rejected under 35 U.S.C. § 112, second paragraph, for allegedly failing to particularly point out the subject matter of the invention. Claims 1-13 and 15-34 were rejected under 35 U.S.C. § 103(a) over U.S. Patent No. 6,073,128 (Pongracz et al.) in view of U.S. Patent No. 6,145,088 (Stevens). Claim 14 was rejected under 35 U.S.C. § 103(a) over Pongracz et al. in view of Stevens, and further in view of U.S. Patent No. 6,038,379 (Fletcher et al.).

The outstanding rejections to the claims are respectfully traversed.

Objection to Claim 14

With respect to the objection to claim 14, Applicant has amended the claim herein to define the term MTF as Microsoft tape format, as utilized in the specification, at least on page 11, lines 15-16. Withdrawal of the objection to claim 14 is thus respectfully requested.

Rejection under 35 U.S.C. § 112

In analyzing the intrinsic evidence, we start with the language of the claims and engage in a "heavy presumption" that claim terms carry their ordinary meaning as viewed by one of ordinary skill in the art. dictionary definitions may be consulted in establishing a claim term's ordinary meaning. Altris v. Symantec, 2003 U.S. App. LEXIS 2646, *11 (Fed. Cir. 2003).

It is respectfully submitted that the term off-line has an ordinary meaning understood by one of ordinary skill in the art, one that is sufficiently particular to satisfy the statutory requirements of 35 U.S.C. § 112, second paragraph . This ordinary meaning to one of ordinary skill in the art is in accordance with and verified by Merriam-Webster's dictionary definition of off-line to mean:

“not connected to or served by a system and especially a computer or telecommunications system; *also* : done independently of a system <off-line computer storage>”

In this regard, Applicant utilizes the term off-line for its ordinary meaning, to mean that the operation, process, or function being referred to in the claim is done independently of the system's operation. It is compelling that the example given for off-line is “off-line computer storage,” similar to the present invention, wherein an operation is provided off-line solving a great need in the art. Applicant thus respectfully submits that the claim term “off-line” has sufficiently particular meaning to satisfy the statutory requirements.

Withdrawal of the rejection under 35 U.S.C. § 112 is respectfully requested.

Summary of the Invention

No present system exists for performing off-line collection and management of backup file subsets for different types of restore operations. Advantageously, the technique may be performed off-line for the analysis, collection and management of backup file subsets for different types of restore operations. Aspects of system restore operations are monitored and analyzed so that in response, off-line management and selection of efficient sets of backup files can be performed to correct inefficiencies that may be detected and to efficiently tailor restore operations to the system characteristics and patterns.

The present invention provides a way to restore a target object such as a volume,

directory or a pre-defined collection of files to a particular time by restoring the last full backup embodying the backup target, the last computed cumulative backup embodying the backup target and possibly the incremental backups after the last computed cumulative backup, if there are any that relate to change in the backup target.

Rejections under 35 U.S.C. § 103(a)

The outstanding rejections to claims 1-34 under 35 U.S.C. § 103(a) are respectfully traversed.

The method of claim 1 relates to a method for generating backup files in a computer system and includes generating a full backup file for a set of objects, then generating incremental file(s) for the set of objects, identifying a target object within the set of objects for the generation of cumulative backup file(s) and generating those cumulative backup file(s) for the target object off-line. Applicant respectfully submit no prior art system relied upon in the Official Action, taken alone or in combination, teaches these features of the present invention.

In reviewing column 3, lines 53-64 of Pongracz et al., Applicant notes that Pongracz et al. discloses to build a list of backup file records of all types of backup files corresponding to the file name and resent stamp received. See Col. 3, lines 42-49 and Col. 4, lines 60 to Col. 5, line 2. In short, maintaining separate backup data for each file in the file system and then scanning that list teaches the opposite of generating a full backup for a set of objects as with Applicant's invention.

For instance, Applicant's system first fully backs up a set of objects (e.g., the whole system), generates incremental file(s) for the set of objects (e.g., the whole system) and then identifies a target object from the set of objects for cumulative backups. To the contrary,

Pongracz et al. discloses to maintain separate full backup data and incremental backup data for each file in the file system. (See also Fig. 3 of Pongracz et al.) Moreover, maintaining separate backup data for each file in a file system is just the type of resource intensive on-line operation that the invention avoids. Independent claims 15, 22 and 32 include similar limitations as claim 1, and are not taught or suggested by Pongracz et al. for similar reasons.

Stevens was cited for reasons relating to off-line operation, and Fletcher et al. was cited for reasons relating to storage block mappings and formatting, but neither Stevens nor Fletcher et al. cure the above-identified deficiency of Pongracz et al. with respect to Applicant's claimed invention. Specifically, none of Pongracz et al., Stevens and Fletcher et al., taken alone or in combination, teach or suggest generating a full backup file for a set of objects, then generating incremental file(s) for the set of objects, identifying a target object within the set of objects for the generation of cumulative backup file(s) and generating those cumulative backup file(s) for the target object off-line, as recited in claim 1, and similarly in claims 15, 22 and 32.

Claims 2-14, 16-21, 23-31 and 33-34 depend from claims 1, 15, 22 and 32, either directly or indirectly, and are believed allowable for the same reasons. Withdrawal of the rejection to claims 1-34 under 35 U.S.C. § 103(a) is respectfully requested.

CONCLUSION

Applicants believe that the present Amendment is responsive to each of the points raised by the Examiner in the Office Action, and submit that Claims 1-34 of the application are in condition for allowance. Favorable consideration and passage to issue of the application at the Examiner's earliest convenience is earnestly solicited.

Respectfully submitted,



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